

Message

From: Whalan, John [Whalan.John@epa.gov]
Sent: 12/11/2013 9:33:55 PM
To: Vulimiri, Suryanarayana [Vulimiri.Sury@epa.gov]; Bateson, Thomas [Bateson.Thomas@epa.gov]; Bayliss, David [Bayliss.David@epa.gov]; Cooper, Glinda [Cooper.Glinda@epa.gov]; Glenn, Barbara [Glenn.Barbara@epa.gov]; Jinot, Jennifer [Jinot.Jennifer@epa.gov]; Kraft, Andrew [Kraft.Andrew@epa.gov]; Makris, Susan [Makris.Susan@epa.gov]; Segal, Deborah [Segal.Deborah@epa.gov]; Subramaniam, Ravi [Subramaniam.Ravi@epa.gov]
Subject: RE:
Attachments: Yokley et al 2008 Sensory Irritation FA.pdf; Yokley 2012 FA Sensory Irritation Dose-response.pdf

As I was researching the reflex bradypnea section, I came across the attached two studies. They are primarily involved with the neurologic regulation of respiration, but they also discuss URT pathology and physiology and FA flux. Their modeling is way over my head.

Andrew, you were wondering who we could invite that is familiar with URT morphology and flux.

Ex. 5 Deliberative Process (DP)

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Previous studies have focused on how inhaled irritants are deposited in the nasal cavity using air flow simulations, such as Kimbell et al. (2001a, 2001b) which focused on formaldehyde deposition predictions. Formaldehyde is highly soluble and close to 100 % of this irritant is absorbed by rat nasal cavity walls during exposure (Hext and Bennett 1993; Kimbell et al. 1993). Additional studies have made connections between fluid dynamic modeling and formaldehyde carcinogenicity in rats (Conolly et al. 2003; Kimbell et al. 1997). Researchers can improve predictions of irritant effects by looking at flux and flow disposition as in Andersen and Sarangapani (2001), Frederick et al. (1998), Georgieva et al. (2003), and improved modeling assists in the understanding of responses to toxicants.

Sury, see whether these studies are of any value for your ADME section. You may have already seen them....

John

From: Vulimiri, Suryanarayana
Sent: Wednesday, December 11, 2013 3:25 PM
To: Bateson, Thomas; Bayliss, David; Cooper, Glinda; Glenn, Barbara; Jinot, Jennifer; Kraft, Andrew; Makris, Susan; Segal, Deborah; Subramaniam, Ravi; Vulimiri, Suryanarayana; Whalan, John
Subject:

Ex. 5 Deliberative Process (DP)

Sury

Ex. 5 Deliberative Process (DP)

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